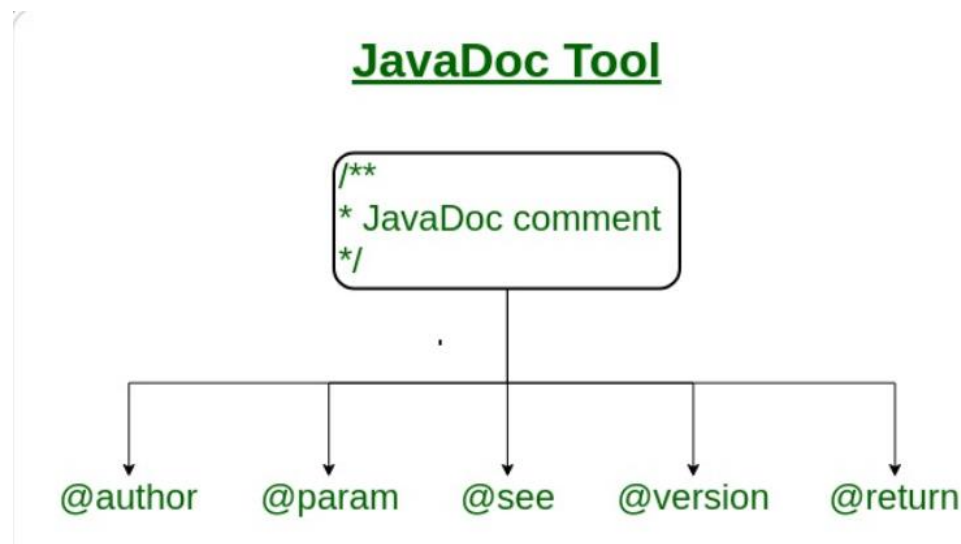


What is JavaDoc tool and how to use it?

JavaDoc tool is a **document generator tool** in Java programming language for generating standard documentation in HTML format. It generates API documentation. It parses the declarations and documentation in a set of source files describing classes, methods, constructors and fields.

Before using JavaDoc tool, you must include JavaDoc comments `/**.....*/` providing information about classes, methods and constructors etc. For creating a good and understandable document API for any Java file you must write better comments for every class, method, constructor.



The JavaDoc comments are different from the normal comments because of the extra asterisk at the beginning of the comment. It may contain the **HTML tags** as well.

```
// Single-Line Comment

/*
 * Multiple-Line comment
 */

/**
 * JavaDoc comment
 */
```

By writing a number of comments, it **does not affect the performance** of the Java program as all the comments are removed at compile time.

JavaDoc Format: –

It has two parts: – a description which is followed by block tags.

Some Integrated Development Environments (IDE) automatically generate the JavaDoc file like NetBeans, IntelliJ IDEA, Eclipse etc.

Generation of JavaDoc: –

To create a JavaDoc you do not need to compile the java file. To create the Java documentation API, you need to write Javadoc followed by file name.

```
javadoc file_name or javadoc package_name
```

After successful execution of the above command, a number of HTML files will be created, open the file named index to see all the information about classes.

JavaDoc Tags

TAG	PARAMETER	DESCRIPTION
@author	author_name	Describes an author
@param	description	provide information about method parameter or the input it takes
@see	reference	generate a link to other element of the document
@version	version-name	provide version of the class, interface or enum.
@return	description	provide the return value

For the full doc comments HOWTO (including a complete list of doc comment tags), please see: <http://www.oracle.com/technetwork/java/javase/documentation/index-137868.html>

To generate JavaDoc in Eclipse: –

- Select “Generate JavaDoc” option from Project menu and a wizard will appear.
- Specify the location for the JavaDoc file on your computer, by default it will be in the C drive.
- Select the project and then the packages for which you want to create the JavaDoc file.

- After this on the right side, select the classes for which you want to generate the JavaDoc, by default all the classes will be selected.
- Then you can also specify for which classes the JavaDoc will be generated by selecting the visibility.
- Select the destination location where the generated JavaDoc will be placed.
- Then click Next or Finish.
If you select Next in the next window you can select the Document title and other basic options.

Example

```
package exa;

import java.util.Scanner;

/**
 *
 * @author Yash
 */
public class Example {
    /**
     * This is a program for adding two numbers in java.
     * @param args
     */
    public static void main(String[] args)
    {
        /**
         * This is the main method
         * which is very important for
         * execution for a java program.
         */

        int x, y;
        Scanner sc = new Scanner(System.in);
        /**
         * Declared two variables x and y.
         * And taking input from the user
         * by using Scanner class.
         */

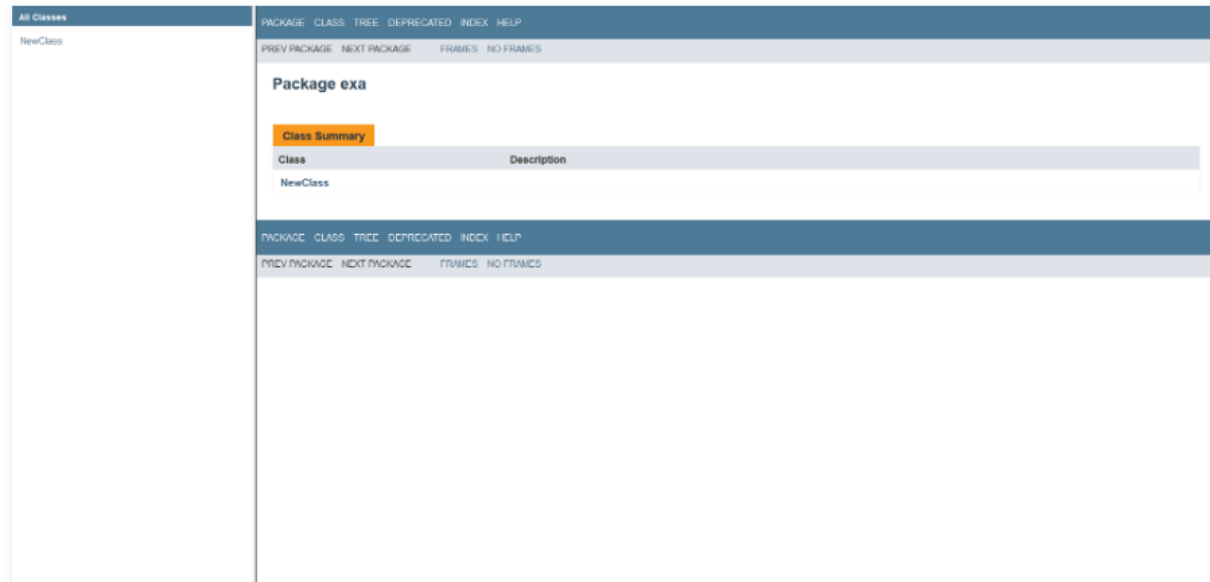
        x = sc.nextInt();
        y = sc.nextInt();
        /**
         * Storing the result in variable sum
         * which is of the integer type.
         */
        int sum = x + y;

        /**
         * Using standard output stream
         * for giving the output.
         * @return null
         */
        System.out.println("Sum is: " + sum);
    }
}
```

Generating document for the above class

```
javadoc exa
```

Screenshot of javadoc: –



Reading Doc Comments (Java API)

You can browse the Java API documentation online at: <http://download.oracle.com/javase/6/docs/api/>

Alternatively, you can download the documentation from http://www.oracle.com/technetwork/java/javase/downloads/bookshelf/java_fundamentals_tutorial/index and browse it locally.

- The top-left frame defines all available packages.
- Clicking on a package name in the top-left frame causes the bottom-left frame to display all interfaces, classes, enumerations, exceptions, errors, and annotations in that package.
- Clicking on the package name in the bottom-left frame (at top) causes the right-hand frame to display the information for that package.
- Clicking on an interface, class, enumeration, exception, error, or annotation in the bottom-left frame, causes the right-hand frame to display the information about that entity. Links within the right-hand frame usually jump to anchors within the same page.

The API Specification for Java™ Platform, Standard Edition 8 can be found at: <https://docs.oracle.com/javase/8/docs/api/>

Your Task

1. Explore the documentation for some of the Java APIs (classes) that you have used in your programs such as: ArrayList, Scanner, Object, PrintStream etc.
2. Create your own Javadoc file for the assignment 'Quiz' from the previous tutorial.
3. Find an open source project from GitHub that has a good documentation and Javadoc file.

References:

1. <https://www.geeksforgeeks.org/what-is-javadoc-tool-and-how-to-use-it/>
2. <https://docs.oracle.com/javase/8/docs/api/>
3. https://www.protechtraining.com/content/java_fundamentals_tutorial-javadoc